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Apartment Investment Opportunities: High Barrier Markets Still Offer the Best Returns

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Introduction

Metropolitan areas with strong appeal as apartment investment markets have traditionally relied upon trends found in coastal markets: a large population base, strong immigration trends, housing supply constraints, and an array of premier financial and technology companies. These types of companies employ a highly skilled and compensated workforce. Further, many of these markets enjoy access to venture capital and dynamic high-tech and bio-tech research and development industries. Strong market fundamentals, high rents and home prices, geographic and policy constraints on supply, and low vacancy rates have long characterized urban, infill or “high barrier to entry” apartment markets.

In this paper we examine 21 US metro areas and determinant characteristics for their desirability for apartment investment. We evaluate demand drivers, such as population, households, income, immigration and jobs. In addition, we review the supply and affordability of housing within the context of barriers to entry, condominiums, rents and median home prices. After segmenting the markets into high barrier and low barrier markets, we consider the historic long-term vacancy rate and inventory growth relative to each segment as well as the nation. A comparison of regional appreciation and income growth as captured by NCREIF returns is addressed. We conclude with a discussion of market recommendations, current market issues and a consideration of risks to apartment investment.

Executive Summary

A geographically broad-based recovery is underway in apartment supply and demand fundamentals, with the vacancy rate at a stabilized 5.8% as of first quarter 2006.

Class A rental growth is forecast to average 4.5% each year for the next three years, with stronger growth occurring in most markets in 2006 and 2007 before slowing in later years.

With condo conversion activity past its peak and a minimal to negative spread over risk-free rates, further cap rate compression is highly unlikely. Expect a moderate rise, primarily in less supply constrained markets.

- The ensuing “horse race” between NOI growth and cap rate-induced valuation changes will initially favor momentum markets with compelling demographics and job markets, provided rental construction remains in check.
- A divergence in pricing between quality Class A and Class B and C assets and markets may become more pronounced again over the next 12 to 18 months.
- Longer-term, markets with supply constraints and low affordability ensure better pricing power and less cap rate risk.

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- Timing of market entry and exit is more critical in low barrier to entry markets because of volatility in supply and high affordability.
- Robust demographic trends offer a compelling story for the apartment sector. The echo boom generation is estimated to represent 76.3 million residents, with the leading edge of this generation entering the workforce and representing a vital component of apartment demand.
- The retirement of the baby boom generation creates an urgent need for pension funds to seek stable cash flows and appreciation. When compared to the volatility of other asset classes, the real estate sector is poised to continue to receive significant investment. Apartments, in particular, offer low space market volatility and therefore the highest risk-adjusted returns. The apartment sector typically performs best in a rising interest rate environment and stands to benefit broadly from trends forecast for the next decade, even with a tempered outlook for employment growth. The key, as always, is choosing high quality assets in the better submarkets underwritten with reasonable expectations.
- Ground-up condominium development already underway now surpasses conversions, with the bulk of deliveries occurring in the next 18 months.
- Multi-family markets at near-term risk for a sizeable correction include South Florida, San Diego, Phoenix, Las Vegas, Atlanta, Tampa and Orlando. Fortunately, they represent some of the fastest-growing markets in the country, both in jobs and population growth.
- Core properties are so fully priced that pre-sale and joint venture development deals and value add plays offer more compelling stories for return, and even those have little margin for error.
- Redevelopment of apartments in truly infill locations is an opportunity, particularly near major job and transit centers. Select the submarkets that appear to have sustainable momentum in gentrification; they will better withstand the next economic down cycle.
- Mixed-use development, especially residential with a retail component, is a popular trend and opportunity and takes the edge off of pioneering a location.

National Apartment Market Overview

The US apartment market enjoyed a 110 basis point drop in the vacancy rate to 5.6% at year end 2005 from one year earlier. The vacancy rate has hovered within a narrow band of 20 basis points since then through second quarter 2006. Steady absorption paired with restrained construction of for-rent housing allowed the national apartment market to gain traction. REIS reports effective rent growth of 3% in 2005, representing the largest gain since 2001. Net absorption of 42,000 units remained modest by historical standards – in contrast, annual absorption during the 1990s averaged 125,000 units. Fortunately, tepid construction of just 75,000 units amounted to the lowest level of building since 1994.

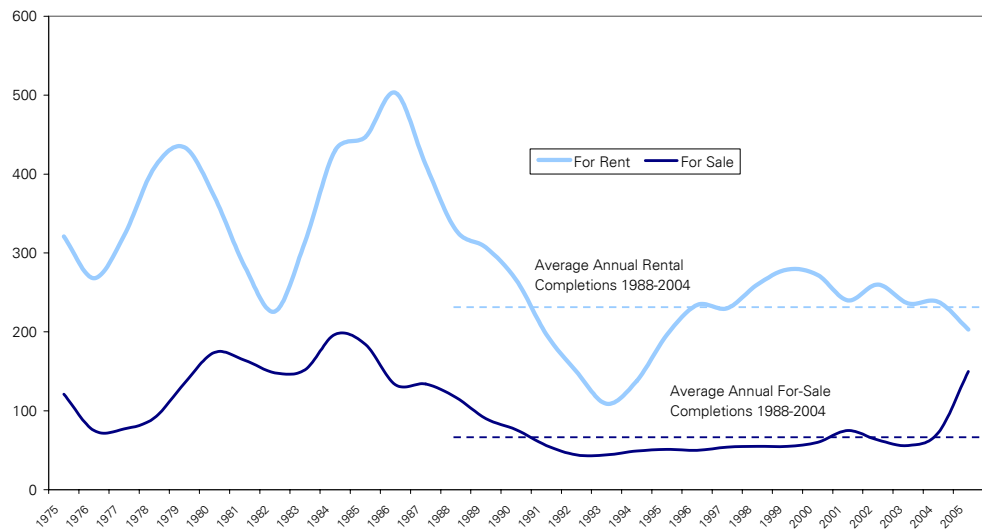
According to another national data source, Axiometrics, the US average effective rent is \$913, which represents a \$99 increase, or 12.2%, from the fourth quarter 2003 trough. This also means rents have recovered nearly 5% above the peak of \$871 achieved in third quarter 2001. In 2006 and beyond, occupancy should inch closer to 95% and effective rent gains should continue, accelerating in late-recovery or supply constrained markets. As the apartment market recovery stretches inward from the coasts, the US market has cycled from recovery into growth. Apartment fundamentals continue to be heavily influenced by the for-sale housing market, both on the supply side, as apartment buildings are converted into

condominiums and removed from stock, and the demand side, as an increase in homeownership decreases the pool of potential residents.

Apartment demand is expected to move closer to the historical average, as rising interest rates and slowing home price appreciation make homeownership less attractive. Summer 2005 looks to have been the peak of the US housing market. Going forward, slower home sales and less home price appreciation are expected. A cooling in the for-sale housing market makes "rondos," or condominium projects returning to the for-rent market, a short-term risk. In a handful of markets, including Washington DC, Baltimore, San Diego and South Florida, a contraction in condo demand has led to a return of buildings to the apartment market. On balance, however, a slowing housing sector should be positive for the US apartment market.

Exhibit 1 shows that multi-family development is clearly off-trend. Averages for the years 1988-2004 were used to exclude both the tax-driven development cycle prior to 1986 and the atypical results of 2005. Rental completions in 2005 were 12% lower than historical trend and for-sale housing was 140% higher than the norm. Developers appeared to take note of the changing dynamics; conversion sales slowed significantly in 2006 with more deals previously tied up by converters dropped and re-presented to income buyers.

Exhibit 1
US Multi-Family Completions 1975-2005



Source: US Census Bureau and RREEF Research

The overriding supply concern is that US housing permits (including single-family, which is at record levels) have grown much faster than household formations over the last five years. Consequently, we find ourselves in a position of rising inventory levels as interest rates rise and sales slow. This may be a temporary period of over-supply gently corrected by builders curtailing building plans, which they appear to be doing. With the volume of condos under construction, however, "what's done is done". A severe rise in the inventory of condominiums available for sale has left certain markets at near-term risk for a sizeable correction, such as South Florida, San Diego, Phoenix, Las Vegas, Atlanta, Tampa and Orlando. The overbuilt condition we expect in these markets may be short-lived due to the fact that these markets are some of the fastest-growing in the country, both in jobs and population growth. Longer-term, condominiums are a healthy off-shoot of the traditional single-family housing market with "legs", given the up-and-coming echo boomers, retiring baby boomers, immigration, and trends toward infill locations.

The good news on the demand side is that while the extended housing boom continued through the recession, US economic growth has been solid thus far into the business cycle. While we do expect a moderation in this growth by the end of 2006 and beyond, the US is projected to add 14.6 million new households between 2005 and 2015, an average of roughly 1.5 million new households each year. Comparatively, the US has added about 1.3 million new households each year since 2001. The 15% acceleration in new household formations is driven by the coming of age of the echo-boomers and strong immigration.

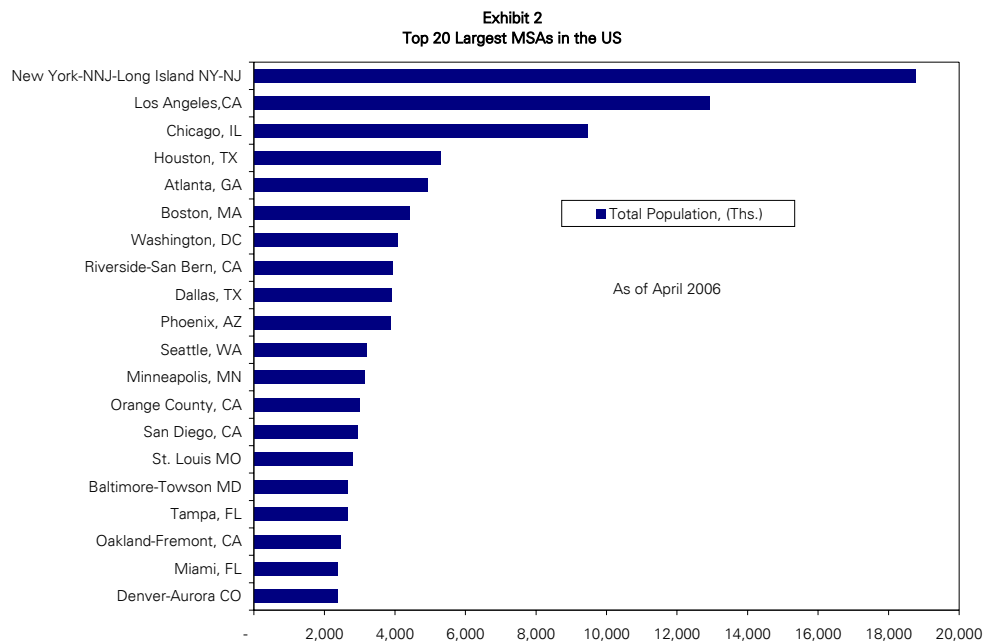
Regional Apartment Markets

Apartment rent growth varies significantly across markets and over time. The ability to increase rents by 10% versus 3% can make or break an apartment investment. Availability of housing, options for substitutability, age and income all play roles of varying degrees of influence on rental growth prospects. For example, younger households show a much higher propensity to rent, but more affluent and older households have a greater ability to pay higher rents and absorb rent increases. We will address some of the constituent characteristics of demand drivers by region.

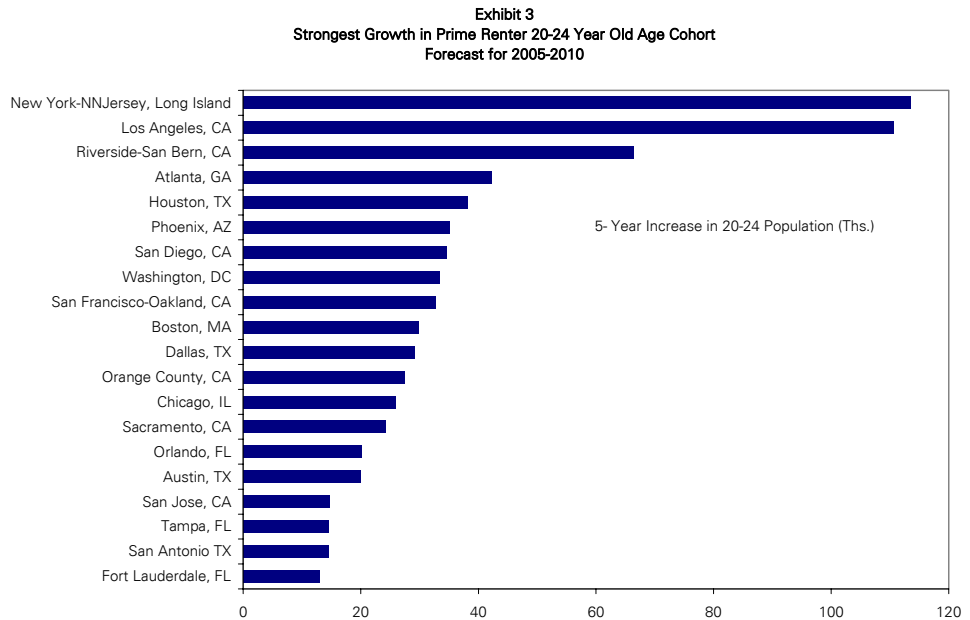
Demand Drivers

Population

Exhibit 2 ranks the largest metropolitan areas in the US. The regional conglomeration of New York, which includes Northern New Jersey and Long Island, clearly overshadows most other metro areas, although the combined population of the Southern California four metros totals 22.8 million. Many of these same markets witnessed the highest levels of population growth over the last 10 years just by virtue of their size; however, as a gauge for where momentum exists, the fastest-growing metro areas on a relative basis were Las Vegas, Austin, West Palm Beach, Orlando, Riverside, Phoenix and Fort Lauderdale.



The echo boom generation in its entirety is estimated to represent 76.3 million residents. The prime renter age cohort of 20-24 year olds, which represents about 7% of the US population and has the highest propensity to rent, contracted during the 1990s, then reversed and turned positive in 2001. Exhibit 3 reflects growth forecast in this age cohort of 20-24 year olds by metropolitan area. This should benefit apartments across the US, but particularly in the coastal, expensive metro areas. This component of the population, while small, is vital as more than 75% historically live in rental housing. The prime renter age cohort in the metros depicted in Exhibit 3 is forecast to grow faster than the US annual average of 0.8%. Growth in this segment of the population is expected to total nearly 900,000 between 2005 and 2010, peaking in 2009 and 2010.



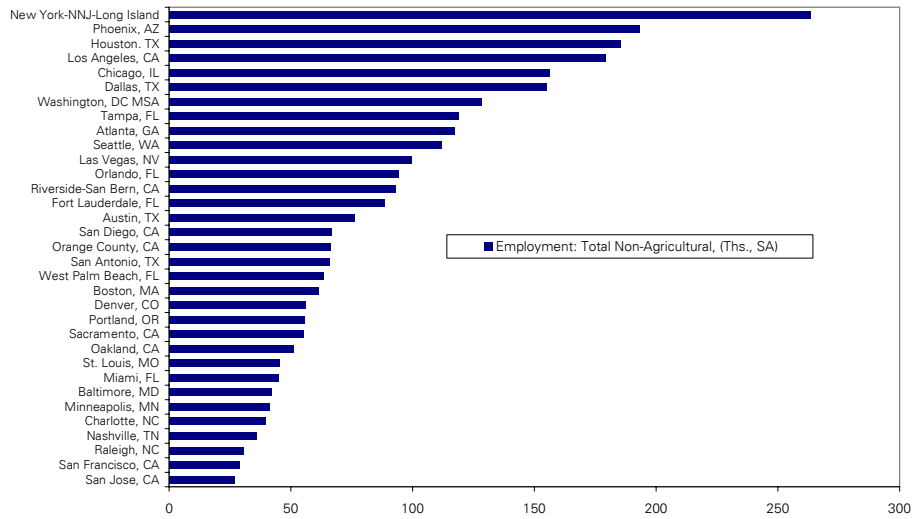
Source: US Census Bureau, Moody's Economy.com and RREEF Research

Jobs

A large and diversified employment base and job creation is also vital to facilitate demand for housing. Exhibits 4 and 5 illustrate the outlook for jobs by metro area ranked both by the sheer number of jobs in the larger metro areas as well as by relative change in markets where strong momentum exists.

The types of jobs being created reflect the composition and growth sectors of the local economy. Intrinsic to the income level in a metro area is education attainment, an important consideration for any apartment investment strategy. For example, if the vast majority of job creation is in the lower-wage service industries then expensive Class A apartments may not perform as well in this location because the household base can't afford the rents. Alternatively, higher incomes in an affordable (low barrier) housing market result in a more affluent renter base that could easily change tenure and buy a home. Ideally, local households with high incomes in a high barrier housing market generally results in a higher propensity to rent with solid rent growth potential.

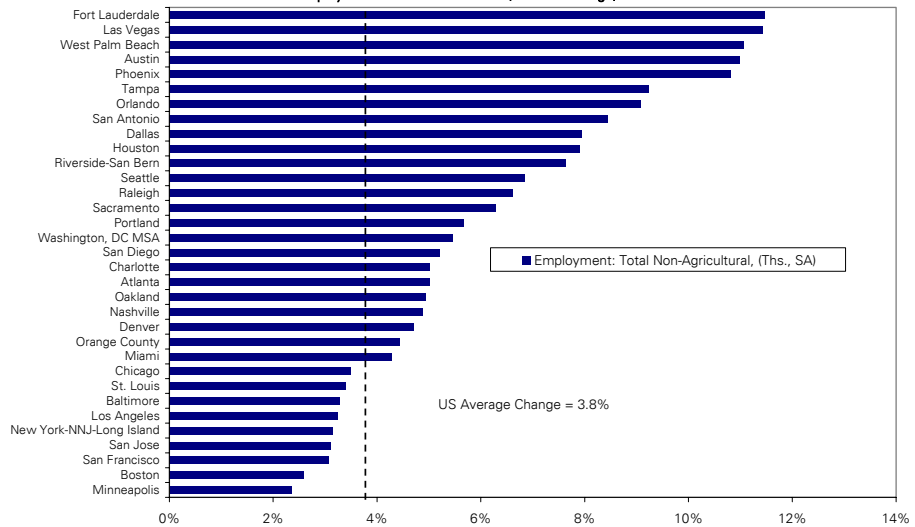
Exhibit 4
Employment Growth Forecast 2006-2008



Source: Moody's Economy.com and RREEF Research

Exhibit 5 presents the forecast for metros expected to have the fastest-growing employment base relative to its current size. The list is a mix of low and high barrier markets. Some of the markets concentrated at the bottom of the list, below the national average, clearly remain very important apartment markets as measured by a number of other metrics. But the list provides a glimpse of where job momentum, and presumably strong apartment leasing activity, is currently. Another timely issue in the employment outlook is the high percentage of housing-related employment concentrated in specific areas of the country. This could give a deceptively high and, ultimately, volatile reading of the strength of the labor markets. A decelerating housing market could create a ripple effect throughout a local economy and employment could contract abruptly. Presumably, apartment properties feel employment contraction ahead of single-family homes given the short-term nature of the financial commitment. Certainly, empirical support exists for the relationship between employment and net absorption of apartment units.

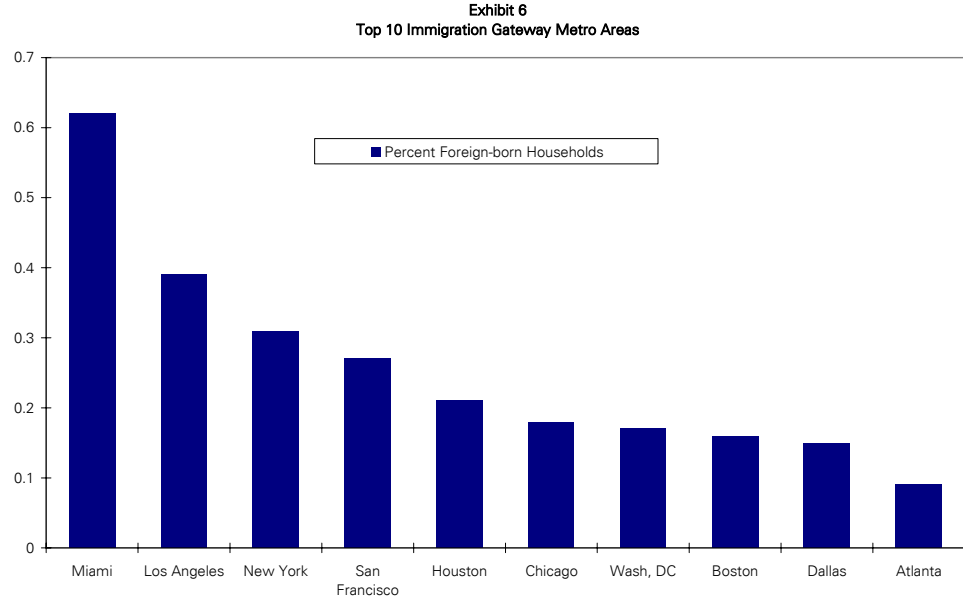
Exhibit 5
Employment Forecast 2006-2008 (Relative Change)



Source: Moody's Economy.com and RREEF Research

Immigration

Immigration is another critical support for apartment demand as it implies an immediate demand for housing, usually rental, initially. Exhibit 6 reflects the top immigration “gateway” metropolitan areas in the US as measured by the percentage of foreign-born households. Not surprisingly, the coastal markets again dominate as the first point of entry into the US. However, domestic migration trends increasingly reflect large numbers of migrants moving to other, more affordable, parts of the country. Some of the fastest-growing metro areas have been Atlanta, Dallas, Houston, Austin, Phoenix, Denver and Raleigh, all low barrier markets. Immigrants are drawn to the promise of plentiful jobs and affordable housing options. According to the National Multi-Housing Council, most apartment renters were born in the US. But while foreign-born residents comprise only 14% of all US households, 26% are renters. This equates to four million out of 16 million immigrant households. Between 1999 and 2004, immigrant households who rented apartments increased by 500,000. The US apartment market would have emerged from the 2001 recession in far worse condition without the buffer of immigrant households, which is expected to contribute in greater proportion to future apartment demand.



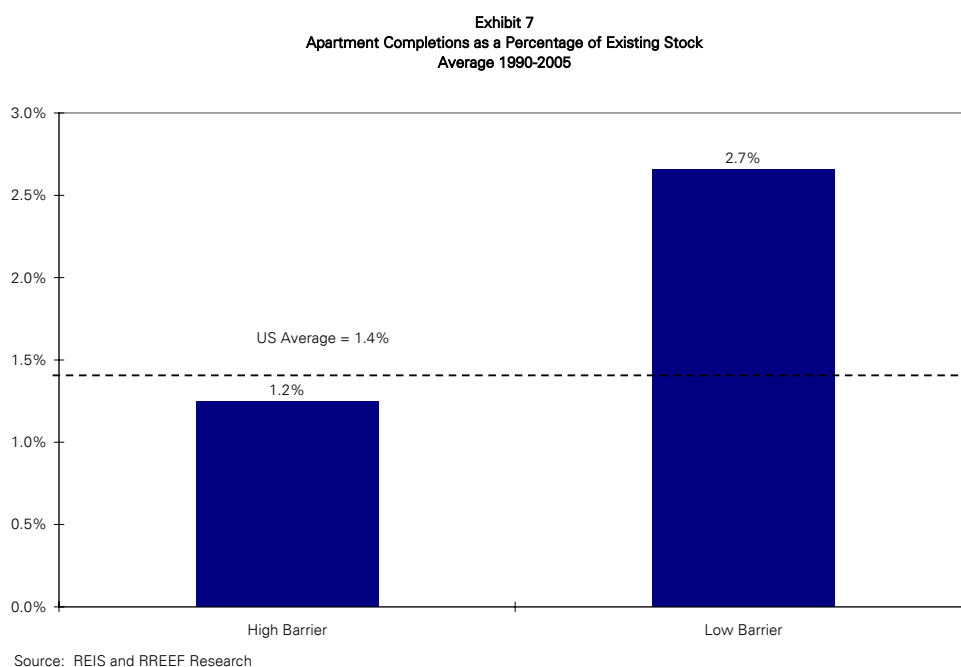
Source: Harvard Joint Center for Housing Studies, [State of the Nation's Housing 2005](#)

Segmenting High Barrier and Low Barrier-to-Entry Markets

RREEF Research broadly segmented the top apartment markets into 12 high barrier and nine low barrier to entry markets based upon the last 15 years of apartment data. Baltimore, Boston, Washington, DC, Fort Lauderdale, Los Angeles, Long Island, Miami, New York, Orange County, San Diego, Seattle and San Francisco represent high barrier markets. Atlanta, Austin, Charlotte, Dallas, Denver, Orlando, Phoenix, Raleigh and San Antonio represent what historically have been considered low barrier markets. Market fundamentals and local policy, housing affordability and incomes generally differentiate the markets.

Market Fundamentals

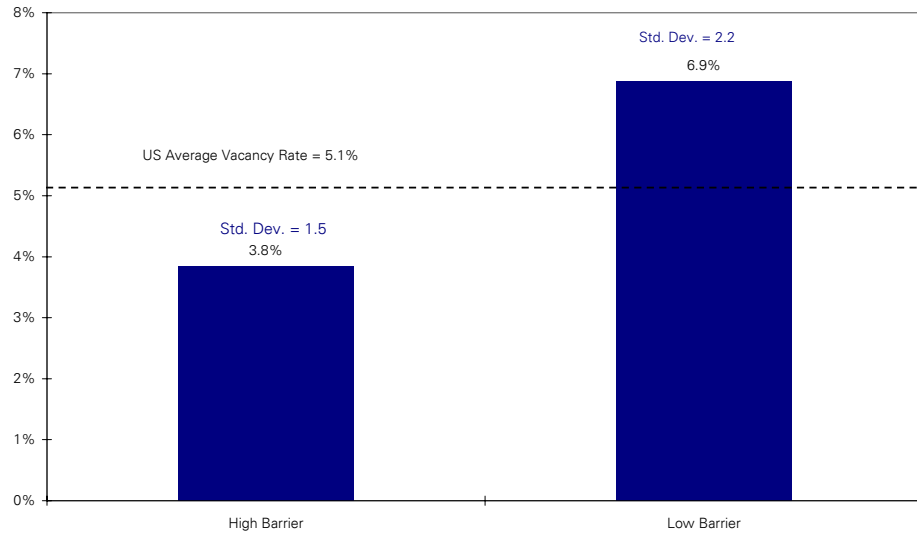
High barrier apartment markets historically have been characterized by modest additions to supply, due to either geographic or policy constraints or both. Exhibit 7 reflects an average level of apartment completions relative to existing stock since 1990 for both high and low barrier to entry markets. It is noteworthy, though, that while many of the high barrier markets added low levels of rental stock, most had a tremendous surge in condominium development and/or conversions. Condos are often offered at a lower price-point than single-family homes, which introduces greater affordability, and hence competitiveness, with rental product than historically has been the case.



Similarly, the low barrier markets of Las Vegas, Orlando, Phoenix and Tampa, and to a lesser extent Atlanta and Dallas, all had significant condo development and conversion occur over the past three years. Much of the multi-family permits designated for rental use easily shifted to condominiums; moderate, and in some cases large, amounts of rental stock were removed from inventory and converted to entry-level for-sale homes. This trend has been especially problematic for low barrier markets as it occurred when low interest rates and hybrid mortgage products greatly facilitated homeownership at a time when labor markets were contracting or still flat. It simply cost less to own than to rent in these markets.

One of the best measures of a market's fundamentals is the average vacancy rate over time, as it captures the dynamics of both supply and demand (See Exhibit 8). Not surprisingly, the average vacancy rates in high barrier markets were roughly half of low barrier markets. In addition it is useful to look at the standard deviation, or volatility, in the vacancy rate in supply constrained versus dynamic markets. Low barrier markets maintained a 130 basis point higher spread over the US average vacancy rate. High barrier markets, in turn, enjoyed a 310 basis point advantage on average over low barrier markets.

Exhibit 8
Average Apartment Vacancy Rate 1990-2005



Source: REIS and RREEF Research

Exhibit 9 illustrates current vacancy rates in the two market segments. A few markets not shown in Exhibit 9 are noteworthy as well. The largest drop in year-over-year vacancy occurred in Houston (450 bps - Katrina effect), Tampa (210 bps – condo conversions), Austin (200 bps – job growth), Dallas (190 bps – job growth, some Katrina effect) and Phoenix (190 bps – job growth and condo conversions). On the high barrier side, the biggest declines occurred in West Palm Beach (180 bps – condo conversions and jobs), Seattle (170 bps – job growth), and Fort Lauderdale (130 bps – condo conversions). The Seattle apartment market tightened another 50 bps between December 2005 and March 2006. Clearly, many markets benefited and recovered more quickly due to influences other than traditional demand drivers, i.e., the removal of rental inventory from the market or Hurricane Katrina. Whether these units will remain off the market or return in the form of “shadow” rentals remains to be seen.

Exhibit 9
Vacancy Rates as of 1Q06

Low Barrier		High Barrier	
Denver	8.7	Seattle	5.3
Charlotte	8.5	Boston	5.1
Dallas	8.5	Baltimore	4.9
Atlanta	8.4	San Francisco	4.2
Raleigh-Durham	8.3	District of Columbia	4.2
Austin	8.1	San Diego	3.6
San Antonio	6.5	Long Island	3.6
Phoenix	6.3	Miami	3.4
Orlando	4.8	Orange County	3.3
		Los Angeles	3.3
		New York	2.8
		Fort Lauderdale	2.7
Low Barrier Average	7.6	High Barrier Average	3.9

*US Average = 5.8% as of 1Q06

Vacancy rate below average due to high level of condo conversions

Source: REIS and RREEF Research

Affordability

Rents and rent growth are a function of local home prices, incomes and market conditions. Coastal markets tend to be constrained by natural geographic boundaries as well as general local opposition to building and encroaching on wetlands. The entitlement process is lengthy and expensive and carries a higher degree of risk and uncertainty about approvals and therefore timing of delivery. While this historically has minimized the number of residential units that can be built, more recently, development has been geared toward infill location with good proximity to transit hubs. This trend makes absolute sense in view of traffic congestion, gasoline prices and an echo boom demographic that prefers greater access to entertainment, retail and business venues offered in an urban setting. The relatively rapid and successful gentrification of formerly blighted areas provides evidence of the viability of this trend. The South of Market (SOMA) area of San Francisco and the Virginia-Highlands neighborhood in Atlanta are just two examples of neighborhoods that experienced a recovery in economic vitality that also had the resilience to emerge intact from the most recent recession.

High home prices by necessity capture a higher number of renter households. Exhibit 10 ranks the metro areas by single-family home prices. California is home to seven of the 15 markets shown. New York, Northern New Jersey, Washington, DC and Boston historically have been expensive housing markets as well. New to the list are Fort Lauderdale and Miami, which supplanted Seattle, due to home price appreciation in excess of 60% over the past two years, three times the national average. At 70%, Riverside, CA posted the highest rate of appreciation since 2003.

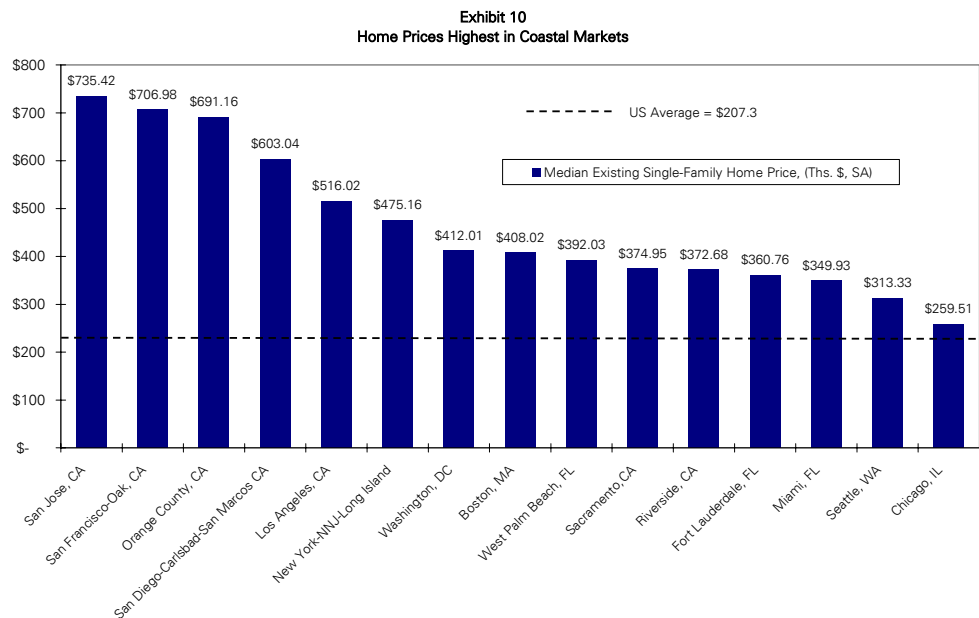
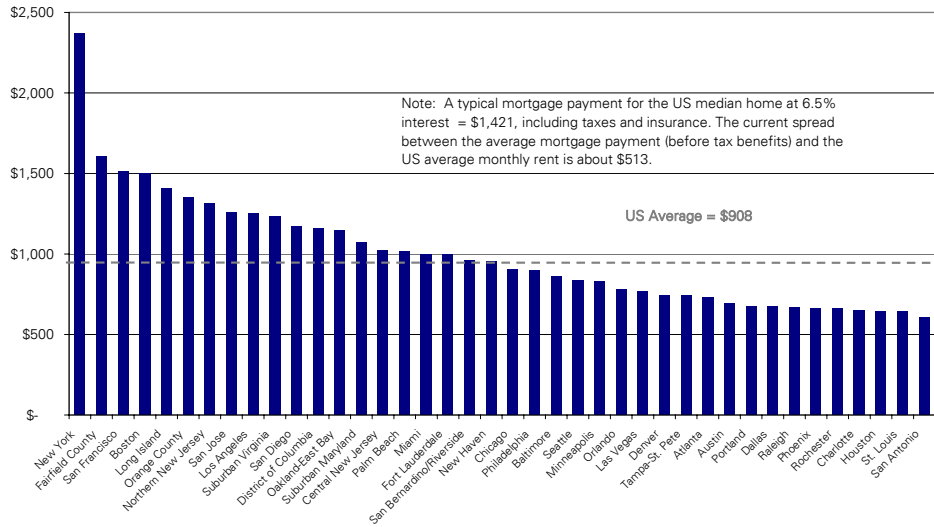


Exhibit 11 illustrates the relationship of rents to home prices. Again, the east and west coast apartment markets achieve the highest rents because of the differential between a monthly mortgage and rental payment. The premium to own is quite high in urban, infill locations, particularly in coastal locations. In low barrier to entry markets, affordable single-family homes effectively create a cap for Class A rents and the potential for growth because of the substitutability of for-sale housing with rental housing.

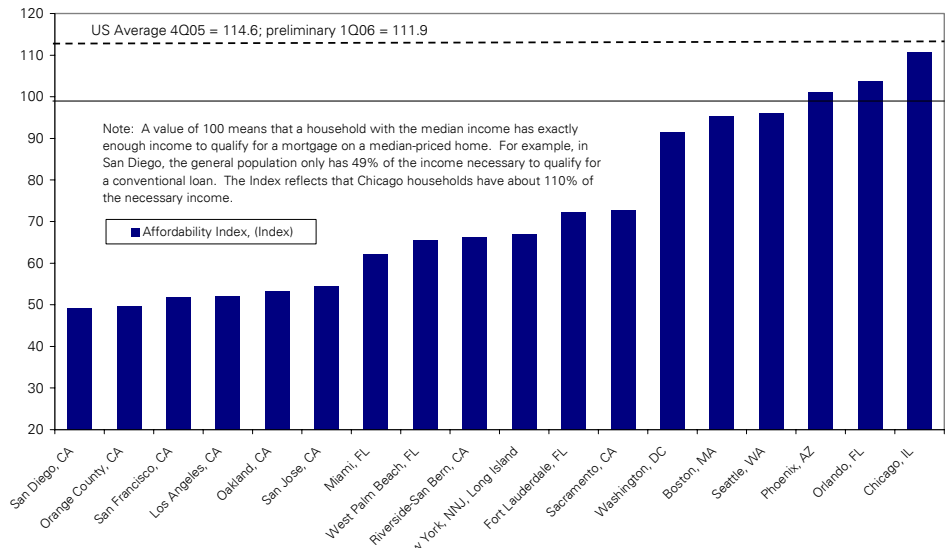
Exhibit 11
Average Effective Rents as of 1Q06



Source: REIS and RREEF Research

The National Association of Realtors calculates a Housing Affordability Index (HAI) every month. The Index is useful because it captures not only home prices, but also median incomes and the ability for local households to pay for a single-family home. Exhibit 12 clearly shows that home price appreciation has surged well ahead of metro incomes across most of California and South Florida. All of the markets on the list are less affordable than the nation.

Exhibit 12
Single-Family Affordability by Metro Ranked Lowest to Highest



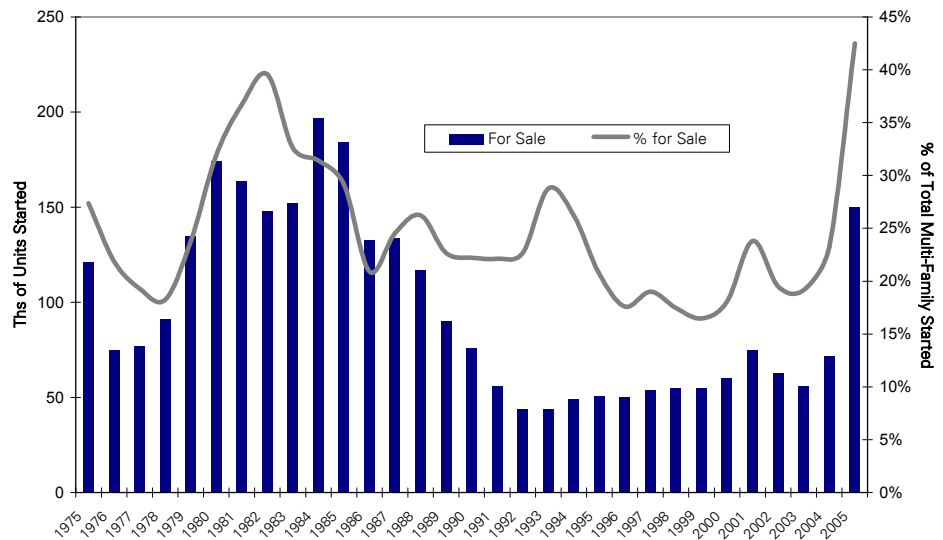
Source: National Association of Realtors and RREEF Research

The high rate of home price appreciation has raised significantly the multiple of a pre-tax mortgage payment to annual rent. For example, dating from 1987 through 2005, the US multiple average was 1.1x. The US remained well below that multiple between 1995 and 2003. Currently, the multiple is approaching 1.4x, near its 1987 peak when interest rates were nearly 10.2%. The economics of renting versus buying a home are a compelling sign for apartment demand.

Condominiums

The uncertainty of condo conversions and ground up development heightens the risk in a sector where returns are already squeezed. Both rental and condo development have been driven disproportionately by capital market pressures rather than space fundamentals. Exhibit 13 shows the sharp rise in starts of multi-family for-sale units expressed both on an absolute and relative basis. Nearly 43% of all multi-family starts were for for-sale product in 2005, nearly double the average of the past 20 years. Nationally, condo conversions of the last few years amount to about 2.5 to 3.0% of institutional grade apartment rental stock, which is not such an alarming number. Various markets are at much higher risk individually than for the sector as a whole. For example, Miami lost nearly 20% of its rental stock to conversion in just three short years. Still, even if half of all condo conversions came back on the market as rentals in South Florida, it might help stabilize the vacancy rate, which right now is headed below 2%. The return of some more reasonably priced rentals would be a relief there. Phoenix, on the other hand, has had nearly 7% of its stock converted to condo, also high relative to the US. It appears that the Phoenix market carries significantly higher short-term risk because of relatively affordable and plentiful housing options. According to one single-family REIT analyst, the number of available homes for sale in first quarter 2005 was 3,500; by first quarter 2006, it had jumped to 35,000 because speculators were leaving the market. What will help Phoenix eventually work through the oversupply are powerful demographics. This is a market that adds nearly 8,000 new households each month.

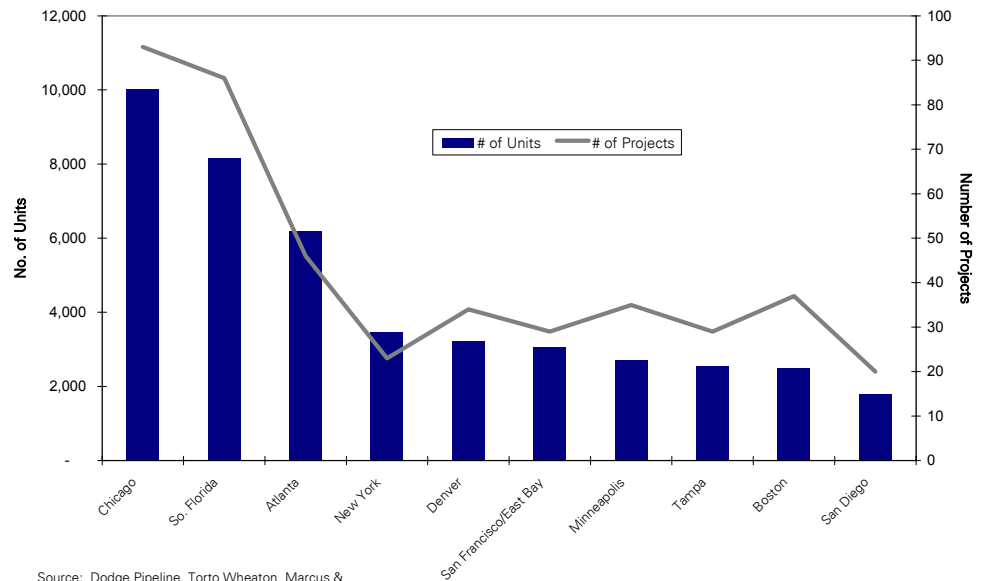
Exhibit 13
Starts of Multi-Family Units For-Sale



Source: US Census Bureau and RREEF Research

Developers appear to be taking note of the changing market dynamics because conversion sales have slowed significantly in 2006 with more deals previously tied up by converters dropped and re-presented to income buyers. Further, conversion plans for nearly 47,000 units concentrated in 10 major markets were abandoned or deferred in 2005 (See Exhibit 14).

Exhibit 14
2005 Deferred or Abandoned Condo Projects

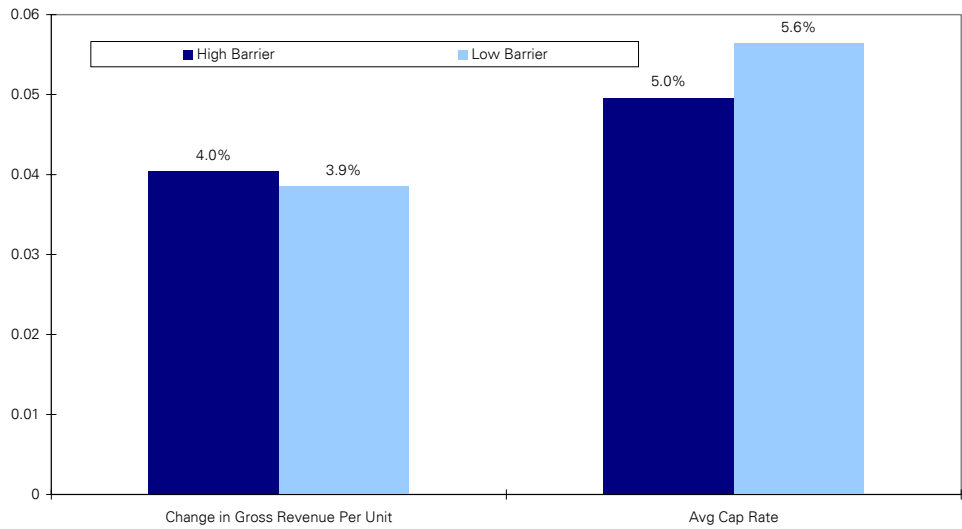


From an investment perspective, since condo conversion sales accounted for 35 to 40% of all apartment sales in recent years at a premium price point, it does seem that the exit of condo converters will create upward pressure on cap rates at some point. Rising NOIs will take up some of the slack, but it also helps that many institutional investors are underweight in apartments, given the difficulty in competing with converters as well as capitalizing on the market and selling their apartments at a premium. Apartments remain the real estate sector offering the highest risk-adjusted returns and, as even as appreciation rates cool, income returns will recover. Given alternative investments and demographic trends, they look to remain a favorite. The key is in the selection of markets and, more importantly, submarkets, in which to invest. Apartment properties located in supply constrained markets with low affordability historically have maintained their value the best through a full economic cycle.

Apartment Values – A Rising Tide Lifts All Boats...for how long?

We reviewed the 15-year period 1990-2005, which captures the impact of two national recessions and an expanded period of economic expansion and compared regional performance. Exhibits 15-17 highlight the similarities as well as differences in regional apartment markets. Exhibit 15 illustrates the somewhat surprisingly modest difference in gross revenue per unit for both high barrier and low barrier to entry markets. Exhibit 16 reflects stronger effective rent growth and lower overall vacancy rates in high barrier to entry markets, but low barrier markets benefit from the ability to grow occupancy at an accelerated pace relative to supply-constrained, low vacancy markets. The 60 basis point spread in cap rates that exists between high and low barrier markets on average is less pronounced in today's transaction market for top quality assets in desirable submarkets.

Exhibit 15
Revenue Growth in Low and High Barrier Markets and Average Cap Rates
1990-2005



Source: REIS, Real Capital Analytics and RREEF Research

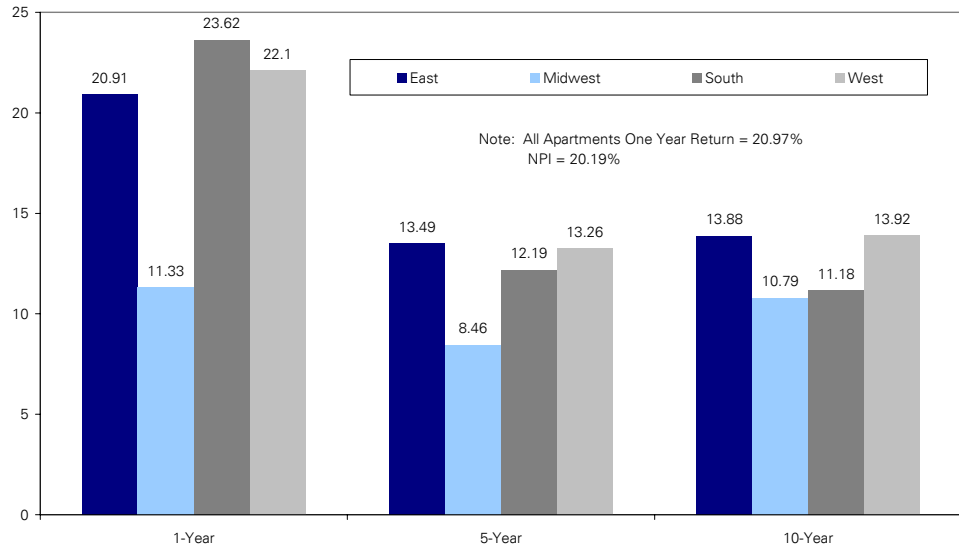
Exhibit 16
Historical Trends

High Barrier Markets					Low Barrier Markets				
Year	Comp as % of stock	Vacancy Percent	Eff Rent % Change	% Chg Gross Rent Revenue	Year	Comp as % of stock	Vacancy Percent	Eff Rent % Change	% Chg Gross Rent Revenue
1990	2.9%	5.0	3.0	n.a.	1990	2.5%	8.4	3.7	n.a.
1991	1.7%	5.1	1.5	1.3%	1991	1.4%	8.4	4.9	4.6%
1992	0.8%	4.4	2.3	3.1%	1992	0.8%	6.6	6.1	7.6%
1993	0.7%	4.6	2.0	1.4%	1993	0.8%	5.5	6.0	6.7%
1994	0.6%	4.3	2.4	2.6%	1994	1.5%	5.2	6.1	6.1%
1995	0.8%	3.8	2.9	3.2%	1995	2.9%	5.2	5.3	5.5%
1996	0.9%	3.3	6.2	6.4%	1996	4.5%	5.7	5.4	5.1%
1997	1.2%	3.1	5.7	5.5%	1997	4.3%	5.7	4.6	4.7%
1998	1.5%	2.9	5.4	5.6%	1998	3.4%	5.7	3.7	3.6%
1999	1.8%	2.6	7.7	7.6%	1999	4.1%	5.5	4.8	5.1%
2000	1.5%	1.8	10.5	10.7%	2000	4.2%	4.3	4.9	6.3%
2001	1.4%	3.4	2.4	3.3%	2001	3.9%	7.8	(0.4)	(0.8%)
2002	1.2%	4.4	(0.3)	0.3%	2002	3.0%	9.7	(3.5)	(1.7%)
2003	1.3%	4.8	1.7	1.8%	2003	2.5%	9.9	(1.9)	0.2%
2004	1.0%	4.5	3.3	3.4%	2004	1.3%	9.1	0.3	1.4%
2005	0.7%	3.8	3.9	4.3%	2005	1.5%	7.3	2.1	3.5%
Avg	1.2%	3.8	3.8	4.0%	Avg	2.7%	6.9	3.3	3.9%
		cumulative	60.7					52.2	

Source: REIS and RREEF Research

Exhibit 17 shows the NCREIF annualized apartment returns by region. The Sunbelt region stands out leading the one-year return as the local job market recovers help boost absorption and occupancies. The 10-year returns clearly indicate superior returns in the east and west coast regions compared to the South and Midwest. Parsing the contribution to total return for all apartments, the appreciation component contributes 70% to the one-year return. Comparatively, appreciation contributes 38% to the 10-year return. Regionally, appreciation and income contribute more equivalently to total 10-year returns in the East and West, while income returns in the South and Midwest account for more than two-thirds of the total return.

Exhibit 17
NCREIF Annualized Apartment Returns By Region



Source: NCREIF and RREEF Research

The ensuing “horse race” between NOI growth, an increase in 10-year Treasuries and cap rate-induced valuation changes could initially favor momentum markets with compelling demographics and job markets. Exhibit 18 illustrates the impact of a rise in 10-Year Treasuries and a potential shift in capital flows. Using transaction data from Real Capital Analytics reported as of first quarter 2006, the aggregate cap rate for high barrier to entry markets was 4.96%, compared to low barrier to entry markets at 5.64%. The 68 basis point cap rate spread between when applied to a \$1 million income stream (NOI) yields a value differential of 13.7%.

Exhibit 18
Impact of Rise of 10-Year Notes and Changing Risk Assumptions

High Barrier Market Assumptions				Low Barrier Market Assumptions			
Base Case				Base Case			
Yield on 10 Yr Note	5.04%			Yield on 10 Yr Note	5.04%		
Implied Risk Premium	-0.08%			Implied Risk Premium	0.60%		
Cap Rate	4.96%			Cap Rate	5.64%		
Multiple	20.2			Multiple	17.7		
NOI	\$ 1,000,000			NOI	\$ 1,000,000		
Valuation	20,161,290			Valuation	\$ 17,730,496		
Scenario A				Scenario A			
Yield on 10 Yr Note	5.75%			Yield on 10 Yr Note	5.75%		
Implied Risk Premium	-0.25%			Implied Risk Premium	0.75%		
Cap Rate	5.50%			Cap Rate	6.50%		
Multiple	18.2			Multiple	15.4		
NOI	\$ 1,109,000	10.9% NOI Growth		NOI	\$ 1,153,000	15.3% NOI Growth	
Valuation	\$ 20,163,636	0.0% Change in Value		Valuation	17,738,462	0.0% Change in Value	
NOI growth needed to break even in value?				NOI growth needed to break even in value?			
2.2% annual				3.1% annual			
Scenario B				Scenario B			
Yield on 10 Yr Note	5.75%			Yield on 10 Yr Note	5.75%		
Implied Risk Premium	-0.25%			Implied Risk Premium	0.75%		
Cap Rate	5.50%			Cap Rate	6.50%		
Multiple	18.2			Multiple	15.4		
NOI	\$ 1,302,500	30.3% NOI Growth		NOI	\$ 1,354,000	35.4% NOI Growth	
Valuation	\$ 23,681,818	17.5% Change in Value		Valuation	20,830,769	17.5% Change in Value	
NOI growth needed to perform at inflation (3.5% annually)?				NOI growth needed to perform at inflation (3.5% annually)?			
6.1% annual				7.1% annual			

Source: RREEF Research

Scenario A reflects a hypothetical five-year hold and the NOI growth necessary for the asset just to hold its value if the 10-year rises 75 basis points and cap rates rise approximately 50 and 90 basis points for high and low barrier to entry markets, respectively. This analysis assumes that the low barrier to entry markets would have a greater risk of drifting higher toward its long term average cap rates. At 10.9 and 15.3% NOI growth over a five-year hold, the result would be a conservative assumption of growth occurring in an economic up-cycle.

Scenario B takes the analysis further, growing the value by 3.5% annually to match inflation assumptions. High barrier markets require at least 30% NOI growth over the hold period compared to a minimum of 35% for low barrier to entry markets, or 6.1 and 7.1% annually. This level of consistent growth may occur in those low barrier markets where concessions and occupancies have not fully recovered, such as Austin, Dallas and Denver, and, to a lesser degree, Atlanta and Phoenix, where many submarkets have already recovered occupancies and reduced concessions. This simple analysis assumes “a lot of things go right” for the US economy and local markets, and also takes a fairly benign view of continued strong capital flows into real estate in general and a shift in investor perception as to the lower risk assigned to low barrier to entry markets.

Implications for Investment Strategy and Risks

Let’s examine the reasons why investors may take a forward view that is more favorable to apartment markets that historically were categorized as riskier due to supply and affordability concerns. In other words, why might investors believe that the current 5.5% cap rate in Atlanta or Phoenix will not revert to 8.0% over the next few years?

First, looking forward to the next decade, the demographic shifts in the US clearly favor the Sunbelt markets, like Georgia, South Florida, the Carolinas, Texas and Arizona. The wave of echo-boomers, immigrants, retiring baby-boomers, the elderly and the rise in “non-traditional” households will exercise tremendous influence on demand for all types of housing, but particularly for apartments and thus may generate different return dynamics regionally. The largest component of apartment demand will come from echo boomers in the 20-34 year-old age cohort as they begin entering the workplace in force. US Census data suggests that the period 2005-2015 is forecast to be a peak cycle of robust growth in this segment of the population. One could argue that these low barrier to entry markets stand to benefit disproportionately in both absolute and relative shares of this expansion.

Second, rising construction costs have significantly driven up replacement cost in traditionally low barrier to entry markets. Further to the increases in commodity pricing and labor costs, a greater share of new development in Atlanta, Dallas and Phoenix, for example, is higher density in infill locations, with proximity to transit systems, or with a retail component. Infill locations near transportation, business, retail, entertainment and cultural venues are more expensive to build, but highly desirable and garner a premium in the market. Further, mid and high-rise properties require structured parking, elevators, and greater security systems, all of which push up replacement cost.

Finally, investors may view infill, high density submarkets in traditionally low barrier markets as having similar characteristics to high barrier to entry markets but priced at a discount to high barrier submarkets. Depending upon the market, Atlanta and Phoenix may not have the higher cost of labor nor the same policy hurdles that impact entitlement, timing and create development risk such as in San Francisco, Los Angeles, or Manhattan. Also, by definition, infill urban submarkets are increasingly supply-constrained.

The dynamics going forward suggest a healthy regional diversification. Markets with high barriers to entry appear to offer greater protection during an economic downturn or from supply side risk. At any given point in the economic cycle, the asset is likely to hold its value during a sale because of both stronger NOIs as a result of better space fundamentals as well as fewer competing assets available for sale. Implicit in affordability issues is a consistently high level of apartment demand by necessity and a less challenging effort to maintain a stabilized occupancy rate in an economic downturn as well as a quicker recovery period.

Markets with low barriers to entry tend to capture the lions' share of job and population growth and offer good value add opportunities to rapidly grow net operating income. The key is to choose the best assets in the best submarkets, with more supply constraints and expensive housing. This typically implies more urban, infill areas. From a development perspective, adding a retail component from the start takes the edge off of pioneering an urban location.

Demographic projections suggest a future of a more predictable and diversified demand base. The bifurcation in the types of resident demand will present a property management challenge in understanding the resident profile and catering to it. For example, the younger age-cohorts will seek infill locations, proximate to employment and entertainment venues as well as transit hubs. They seek convenience and amenities, yet may be price sensitive by necessity. Retiring baby-boomers may also seek urban, infill locations, but demand higher finish, luxury units with concierge service and proximity to cultural and retail venues. The Hispanic population may influence demand for suburban rentals, desiring larger units for families and good school districts. With an eye to homeownership, they may be price sensitive to rental increases.

Risks associated with apartment investment at this point in the cycle include:

- Universal strong interest in apartment investments raises concerns that too much capital has flowed into the sector and has jeopardized capital market fundamentals;
- Employment growth is requisite to balanced space market fundamentals. Higher interest rates and energy prices could truncate promising economic growth;
- More restrictive immigration policies could diminish a vital component of apartment demand;
- Once considered a defensive play to economic downturns, the last recession proved apartments are not immune to recession, with the high end apartment market particularly vulnerable to economic malaise; and,
- High rates of foreclosures in Sunbelt markets and excessive levels of new condominiums delivering over the next 12-18 months may offer a competitive challenge to rentals in the form of shadow rentals or as a lower point of entry into homeownership.
- At a broad level, the retirement of the baby boom generation creates an urgent need for pension funds to seek stable cash flows and appreciation. When compared to the volatility of other asset classes, the real estate sector is poised to continue to receive significant investment. Apartments, in particular, offer low space market volatility and therefore the highest risk-adjusted returns. The apartment sector typically performs best in a rising interest rate environment and stands to benefit broadly from trends forecast for the next decade, even with a tempered outlook for employment growth. The key, as always, is choosing high quality assets in the better submarkets underwritten with reasonable expectations.

ANALYST CERTIFICATION

The views expressed in this report accurately reflect the personal views of the undersigned lead analyst. In addition, the undersigned lead analyst has not and will not receive any compensation for providing a specific recommendation or view in this report.

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